

A PORTABLE VACUUM CLEANER

FIELD OF THE INVENTION

The present invention relates to a portable vacuum cleaner used for dust
5 removal from computer and other devices.

BACKGROUND OF THE INVENTION

At the present time, vacuum cleaners for computer devices commonly use
battery as power supply and equipped with changeable suction nozzles of various
10 shapes. However, the bulky dimension of this kind of vacuum cleaner makes it
difficult to collect dust expediently. Moreover, the narrow and deep crevices exist
in many computer devices damper the vacuum efficiency. It is therefore evident
that there is a need for an improved vacuum cleaner for computer devices.

15 SUMMARY OF THE INVENTION

The objective of the present invention is to overcome the disadvantages of
existing vacuum cleaners for computer devices, especially for keyboard and to
provide an easy-to-use and portable vacuum cleaner with high vacuuming
efficiency.

The portable vacuum cleaner of the present invention comprises a shell, electric motor, power cord, impeller, airtight loop, filter and suction nozzle. In this vacuum cleaner, (1) the power plug may have end-to-end joint with the Universal Serial Bus (USB) interface of computer; (2) a head lamp may be mounted below
5 the external surface in the middle axial part of the shell; (3) the cross-sectional view of suction nozzle takes the shape of an elongated thin pipe; (4) the disassembling connection is between the suction nozzle and the shell; (5) a brush having one end being longer than intake surface of suction nozzle is located on the external surface of the suction nozzle; and (6) a hanging loop is located above the
10 power cord near the end of the shell.

In this novel practical vacuum cleaner, the end-to-end joint between the power plug and USB interface of computer allows power to be easily supplied to the vacuum. The head lamp at the lower part of the vacuum cleaner makes it easy to suck dust inside computer or in dim light. Changing suction nozzles with
15 different shapes based on requirements and then the brush being on the external circle surface of the nozzle allows dust to be removed from the narrow crevices among components inside and outside the computer devices. Furthermore, the nozzle can reach these narrow crevices to suck dust. A hanging loop above the power cord makes it easy to store the vacuum cleaner near the computer devices.

Therefore, this vacuum cleaner is a portable, handy, practical and highly efficient dust suction equipment for computer devices, and even for other instruments.

The various objects and advantages of the present invention will be more readily understood from the following detailed description when read in conjunction with the appended

5 drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an axial cross-sectional view of the novel portable vacuum cleaner of the present invention.

10 FIG. 2 is an enlarged sectional view of suction nozzle of Part C in FIG. 1.

FIG. 3 is a cross-sectional view of suction nozzle 6 of FIG. 2.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

15 Referring to FIG. 1, the present novel portable vacuum cleaner includes shell 1, electrical motor 2 with proper input voltage and power to supply power to the vacuum cleaner, power cord 3 with its power plug 9 having end-to-end joint with USB interface of computer, impeller 4, airtight loop 5, filter 11 and suction
20 nozzle 6. In order to vacuum dust inside a computer or in dim light, an indicator lamp base located below the external surface in the middle axial part of shell 1 can

be used to install a light emitting diode (LED) head lamp 7 with relatively higher power. The disassembling connection between the suction nozzle 6 and the shell 1 makes it possible to change suction nozzles with different shapes based on the dusting requirements.

5 Referring to FIG. 2 and FIG. 3, brush 8 having one end being longer than the intake surface of the suction nozzle 6 is located on the external circular surface of the suction nozzle 6 to enable suction to be accomplished in the narrow crevices among components inside and outside computer devices. Additionally, suction nozzle 6 without brush 8 can reach the narrow deep crevices to remove
10 dust with the elongated thin pipe 15 (see cross-sectional view shape), for example, from the narrow spaces in the keyboard. The hanging loop 10 being on the power cord 3 near the end of shell 1 allows the vacuum cleaner to be easily stored near the computer devices. With all the above features, this vacuum cleaner can be considered as a portable, handy, practical and highly efficient dust suction
15 equipment for computer devices.

It is to be understood that the embodiments depicted in the patent specification herein are not intended to be, nor should it be deemed to be, limited thereby and such other modifications or embodiments without departing from the spirit and essential characteristics of such invention herein are particularly

reserved especially as they fall within the breadth and scope of the claims here appended.